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10/049,439	02/12/2002	Akito Fukui	L9289.02114	3646

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EXAMINER

LE, DUY K

ART UNIT	PAPER NUMBER
2685	6

DATE MAILED: 05/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/049,439

Applicant(s)

FUKUI, AKITO

Examiner

Duy K Le

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2.5.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 1, 3-9, and 11 are rejected under 35 U.S.C. 102(a) as being anticipated by Mohebbi (GB 2337414 A).

As to claim 1, the Mohebbi reference discloses a wireless communication system in site selection diversity transmit power control, wherein each base station determines whether the base station is a base station with a high possibility of being requested from a communication terminal to transmit data, based on a downlink state, in the communication terminal, of a downlink signal from the base station to the communication terminal, and transmits the determination result to a control station, and the control station transmits data for a downlink signal to the determined base station (see page 1, line 29 to page 2, line 5; page 7, lines 5-30; page 24, lines 7-29; and Figures 5, 6, 8, 11, 12, and 13).

As to claim 3, the Mohebbi reference discloses the wireless communication system according to claim 1, wherein the base station determines whether to request data to the communication terminal to the control station corresponding to required quality of the data to the communication terminal, in addition to the downlink state, in the communication terminal, of the downlink signal from the base station to the communication terminal (see page 7, lines 5-30; page 22, line 15 to page 23, line 29 (the ranking corresponds to indication of “quality”)).

As to claim 4, the Mohebbi reference discloses a wireless communication system in site selection diversity transmit power control, wherein each base station reports to a control station a downlink state, in a communication terminal, of a downlink signal from the base station to the communication terminal, and based on the downlink state, the control station determines a base station with a high possibility of being requested from the communication terminal to transmit data, and transmits data for a downlink signal to the determined base station (see page 1, line 29 to page 2, line 5; page 7, lines 5-30; page 20, line 25 to page 21, line 8 (the ranking is functionally equivalent to "possibility of being requested"); and Figures 5, 6, 8, 11, 12, and 13).

As to claim 5, the Mohebbi reference discloses the wireless communication system according to claim 1, wherein the control station determines transmission priorities corresponding to required quality of data for a downlink signal (see page 24, line 30 to page 25, line 11. The order of ranking is used to determine transmission priorities and order).

As to claim 6, the Mohebbi reference discloses a control station apparatus, in site selection diversity transmit power control, comprising: receiving means for receiving information on a base station with a high possibility of being requested from a communication terminal to transmit data, the base station determined based on a downlink state, in the communication terminal, of a downlink signal from the base station to the communication terminal (see page 1, line 29 to page 2, line 5; page 7, lines 5-30; page 25, line 32 to page 27, line 3 (the BSC 30 is "the control station apparatus"); and Figure 13); and transmitting means for transmitting data for a downlink signal according to the information ("when the BSM supplied by the MS 40 is detected within a received uplink signal US1, US2 or US3, the control portion 32 examines the BSM and determines therefrom which of the BTSs is to be used to transmit the

downlink signal in the next time slot to the MS 40. If the BSM designates a single BTS, the control portion 32 sets the selection signal SEL such that the selector portion 34 supplies the downlink signal DS just to that one of the connection lines 5_1 to 5_3 connecting the BSC 30 to the designated BTS" (page 26, lines 25-35)).

As to claim 7, the Mohebbi reference discloses a control station apparatus, in site selection diversity transmit power control, comprising: determining means for determining a base station with a high possibility of being requested from a communication terminal to transmit data, based on respective downlink states, in the communication terminal, of downlink signals from base stations to the communication terminal (see page 1, line 29 to page 2, line 5; page 7, lines 5-30; page 25, line 32 to page 27, line 3 (the BSC 30 is "the control station apparatus" and the control portion 32 is "the determining means"); and Figure 13); and transmitting means for transmitting data for a downlink signal to the determined base station ("when the BSM supplied by the MS 40 is detected within a received uplink signal US1, US2 or US3, the control portion 32 examines the BSM and determines therefrom which of the BTSs is to be used to transmit the downlink signal in the next time slot to the MS 40. If the BSM designates a single BTS, the control portion 32 sets the selection signal SEL such that the selector portion 34 supplies the downlink signal DS just to that one of the connection lines 5_1 to 5_3 connecting the BSC 30 to the designated BTS" (page 26, lines 25-35)).

As to claim 8, the Mohebbi reference discloses the control station apparatus according to claim 6, further comprising: determining means for determining transmission priorities corresponding to required quality of data for a downlink signal (see page 24, line 30 to page 25, line 11. The order of ranking is used to determine transmission priorities and order).

As to claim 9, the Mohebbi reference discloses a site selection diversity transmit power control method, comprising the steps of: in each base station, determining whether the base station is a base station with a high possibility of being requested from a communication terminal to transmit data, based on a downlink state, in the communication terminal, of a downlink signal from the base station to the communication terminal (see page 25, lines 22-31; and Figures 8, 10, and 13); and transmitting the determination result to a control station (see page 25, lines 22-31), and in the control station, transmitting data for a downlink signal to the determined base station ("when the BSM supplied by the MS 40 is detected within a received uplink signal US1, US2 or US3, the control portion 32 examines the BSM and determines therefrom which of the BTSs is to be used to transmit the downlink signal in the next time slot to the MS 40. If the BSM designates a single BTS, the control portion 32 sets the selection signal SEL such that the selector portion 34 supplies the downlink signal DS just to that one of the connection lines 5₁ to 5₃ connecting the BSC 30 to the designated BTS" (page 26, lines 25-35)).

As to claim 11, the Mohebbi reference discloses a site selection diversity transmit power control method, comprising the steps of: in each base station, reporting to a control station a downlink state, in a communication terminal, of a downlink signal from the base station to the communication terminal (see page 7, lines 5-30), and in the control station, determining a base station with a high possibility of being requested from the communication terminal to transmit data, based on the downlink state (see Figure 13, and page 25, line 32 to page 27, line 3 (the BSC 30 is "the control station" and the control portion 32 is "the determining means"))); and transmitting data for a downlink signal to the determined base station ("when the BSM supplied by the MS 40 is detected within a received uplink signal US1, US2 or US3, the control portion

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32 examines the BSM and determines therefrom which of the BTSs is to be used to transmit the downlink signal in the next time slot to the MS 40. If the BSM designates a single BTS, the control portion 32 sets the selection signal SEL such that the selector portion 34 supplies the downlink signal DS just to that one of the connection lines 5_1 to 5_3 connecting the BSC 30 to the designated BTS" (page 26, lines 25-35)).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 2337414A to Mohebbi in view of Calot et al. (U.S. Patent 6,690,935).

As to claim 2, the Mohebbi reference discloses the wireless communication system according to claim 1, wherein the base station determines whether to request data to the communication terminal to the control station corresponding to required quality of the data to the communication terminal, in addition to the downlink state, in the communication terminal, of the downlink signal from the base station to the communication terminal (see page 7, lines 5-30; page 22, line 15 to page 23, line 29 (the ranking corresponds to indication of "quality")).

However, it does not disclose the base station determines whether to request data to the communication terminal to the control station corresponding to a buffer usage amount in the base station. The Calot reference teaches the base station determines whether to request data to the

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communication terminal to the control station corresponding to a buffer usage amount in the base station ("the invention also provides an application of the method to a cellular telecommunications systems in which each cellular area includes a base transceiver station for connecting the terminals to the network via a switch, the terminals communicate via a base transceiver station and a call is handed over from a first path via a first base transceiver station to a second path via a second base transceiver station" (Col. 6, lines 1-7). "In one embodiment of the invention, a set of buffers temporarily stores data to be transmitted, each buffer corresponds to a particular type of data to be transmitted, for example, a particular grade of service and/or a particular flow, and handover from the first path to the second path occurs in a practically synchronous manner for the various buffers of the set" (Col. 4, line 64 to Col. 5, line 3). "Two sets of transmit buffers 30 and 32 are provided in each terminal and/or in the connection station in the FIG. 2 example" (Col. 7, lines 7-9). "Prior to the handover command (HO), the buffers 30 are filled with cells to be transmitted and after handover the buffers 32 are filled with cells to be transmitted on the second path" (Col. 7, lines 32-35)).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Mohebbi wherein the base station determines whether to request data to the communication terminal to the control station corresponding to a buffer usage amount in the base station, as taught by Calot, in order to hand over calls simultaneously from one path to another.

As to claim 10, the Mohebbi reference discloses a site selection diversity transmit power control method, comprising the steps of: in each base station, determining whether to request data to the communication terminal to the control station corresponding to required quality of the

data to the communication terminal, in addition to the downlink state, in the communication terminal, of the downlink signal from the base station to the communication terminal (see page 7, lines 5-30; page 22, line 15 to page 23, line 29 (the ranking corresponds to indication of “quality”)); and transmitting the determination result to a control station, and in the control station, transmitting data for a downlink signal to the determined base station (see Figure 13, and page 25, line 32 to page 27, line 3 (the BSC 30 is “the control station”. The selector portion 34 sends the downlink signal DS to the designated BTS)).

However, it does not disclose in each base station, determining whether to request data to the communication terminal to the control station corresponding to a buffer usage amount in the base station. The Calot reference teaches in each base station, determining whether to request data to the communication terminal to the control station corresponding to a buffer usage amount in the base station (“the invention also provides an application of the method to a cellular telecommunications systems in which each cellular area includes a base transceiver station for connecting the terminals to the network via a switch, the terminals communicate via a base transceiver station and a call is handed over from a first path via a first base transceiver station to a second path via a second base transceiver station” (Col. 6, lines 1-7). “In one embodiment of the invention, a set of buffers temporarily stores data to be transmitted, each buffer corresponds to a particular type of data to be transmitted, for example, a particular grade of service and/or a particular flow, and handover from the first path to the second path occurs in a practically synchronous manner for the various buffers of the set” (Col. 4, line 64 to Col. 5, line 3). “Two sets of transmit buffers 30 and 32 are provided in each terminal and/or in the connection station in the FIG. 2 example” (Col. 7, lines 7-9). “Prior to the handover command (HO), the buffers 30

are filled with cells to be transmitted and after handover the buffers 32 are filled with cells to be transmitted on the second path" (Col. 7, lines 32-35)).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Mohebbi to comprise the step of in each base station, determining whether to request data to the communication terminal to the control station corresponding to a buffer usage amount in the base station, as taught by Calot, in order to hand over calls simultaneously from one path to another.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Qing-An (U.S. Patent 6,487,409) discloses handoff control system handoff control method, and storage medium storing handoff control program.
- b. Tiedemann, Jr. (U.S. Patent 6,307,849) discloses method and system for changing forward traffic channel power allocation during soft handoff.
- c. Blakeney, II (U.S. Patent 5,640,414) discloses mobile station assisted soft handoff in a CDMA cellular communications system.

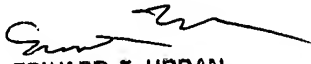
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duy K Le whose telephone number is 703-305-5660. The examiner can normally be reached on 8:30 am - 5:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F Urban can be reached on 703-305-4385. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Duy Le
April 30, 2004


EDWARD F. URBAN
SUPERVISORY PATENT EXAMINER
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